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| 09/583,952 | 05/31/2000 | Kousuke Anzai | 566.38616X00 | 2316 |

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EXAMINER

LE, BRIAN Q

ART UNIT PAPER NUMBER

2623

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/583,952

Applicant(s)

ANZAI ET AL.

Examiner

Brian Q. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-10,12-14,16-18,20-22 and 24-26 is/are rejected.
- 7) ☒ Claim(s) 3,7,11,15,19 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/05/2005 has been entered.

Response to Amendment and Arguments

2. Applicant's amendment filed March 29, 2005, has been entered and made of record.

3. Applicant's arguments, see "Remarks", filed March 29, 2005, with respect to the rejection(s) of claim(s) 1-2, 4-6, 8-10, 12-14, 16-18, 20-22, and 24-26 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Nakano U.S. Patent No. 6,510,233.

Thus, the rejections of all of the claims are maintained.

Specification

4. The disclosure is objected to because of the following informalities: The disclosure does not show the support for the limitation "said location of said area G thus located repeatedly being independent of said digital watermark information". The Applicant cited page 20, line 5 – page 21, line 4 to show the support for this limitation. However, this portion of the disclosure still do not show the teaching of location of are G located repeatedly being independent from watermark information.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2, 4-6, 8-10, 12-14, 16-18, 20-22, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Miyahara U.S. Patent No. 6,341,350 and Nakano U.S. Patent No. 6,510,233.

Referring to claim 1, Miyahara teaches a method embedding digital watermark information (Abstract, first 6 lines) $b_1 - b_n$ ($2 \leq n$) in image data, comprising steps of:

Dividing the image data into a plurality of areas S (The whole figure, 6×4) each consisting of $M \times N$ ($1 \leq M, N$) pixels (FIG. 3);

Defining an area G (8×8 block) consisting of $P \times Q$ ($1 \leq P, Q$) of the areas S (FIG. 3);

Allocating each of the areas S constituting said area G to some one of: areas $T_1 - T_n$ whose pixel values are changed (the gray blocks) and areas $H_1 - H_m$ ($1 \leq m$) whose pixel values are not changed (the white blocks)(FIG. 8) (code bit string or code bit pattern within image data where some areas of the image will be embedded/changed with watermarking with bit of information 0 and 1 and other area will be remained with regular data of the image with also bit information 0 and 1) (FIG. 3; FIG. 6, "code bit string"; FIG. 8; FIG. 10; FIG. 11; FIG. 12, S42; S44; FIG. 13);

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Corresponding each of said T_1 - T_n whose pixel values are changed, to each of said digital watermark information $b_1 - b_n$ and changing the pixel value of each area T according to a bit value (FIG. 2, "Accompanying Information Signal P", element 11, element 101);

Locating one or more areas T and one or more areas H in a predetermined arrangement in said area G (watermark pattern is a predetermined arrangement) (FIG. 8); and

Locating the plurality of areas G repeatedly over entered image data (process each pixel in target image) (column 5, lines 15-20; column 7, lines 15-20; column 10, lines 50-53; in a predetermined rule (column 5, lines 31-44).

However, Miyahara does not explicitly teach the method of locating said area G repeatedly wherein said location of said areas G thus located repeatedly is not dependent on said digital watermark information. Nakano further teaches a method of image watermark processing wherein prior art discloses that the allocation/location of a specific region of image does not depend on the type of watermark data/information. Modifying Miyahara's method of embedding digital watermark information in image data according to prior teachings of Nakano would be able to prevent the original signal information from being changed by the digital watermark information. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Miyahara according to Nakano.

For claim 2, please refer for claim 1 for the explanation. Furthermore, Miyahara discloses areas $J_1 - J_k$ ($1 \leq k$) in which information $p_1 - p_k$ ($1 \leq k$) specifying an embedding format for embedding said digital watermark information $b_1 - b_n$ in said areas $T_1 - T_n$, and areas $H_1 - H_m$ (a block where code image data is located) (column 7, lines 45-46 and column 19, lines 10-13).

Regarding claim 4, Miyahara teaches the method of embedding digital watermark information wherein each of said areas G includes a plurality of said areas H that have been allocated so as to be asymmetric (FIG. 3) in vertical and horizontal directions in the are G (please refer back to “Response to Amendment and Arguments” for further discussion).

For claim 5, please refer to claim 1 for the explanation. In addition, Miyahara teaches the method of extracting digital watermark information (the detection of watermarking by using decoder and detector) (FIG. 32, elements 21 and 22) and the extracting the digital watermark information b1- bn from the recognized areas T1 – Tn (FIG. 14, S64 and S66).

Regarding claim 6, please refer back to claim 2 for the explanation. Also, Miyahara discloses the method wherein recognizing the embedding format of the digital watermark information and extracting the digital watermark information according to the recognized embedding format (formatter provides the format information so that the encoder/embeds watermark and decoder/extracts watermark information so that the encoder and the decode would have the same format configuration) (column 20, lines 24-27).

For claim 8, please refer back to claims 4 and 1 for the explanation. Plus, Miyahara teaches contents of image processing carried out on the image data are judged (column 13, lines 60-63)

For claim 9, please refer to claim 1. Also, Miyahara teaches a program (column 20, line 61) product and a computer reader storage medium (column 9, lines 48-50).

For claim 10, please refer back to claim 2 and claim 9 respectively for the explanation.

For claim 12, please refer back to claim 4 and claim 9 respectively for the explanation.

Regarding claim 13, please refer to claim 1 and claim 9 for the explanation.

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For claim 14, please refer back to claim 6 and claim 9 for the explanation.

For claim 16, please refer back to claims 8 and 9 respectively for the explanation.

For claim 17, please refer to claim 1 for the explanation.

Regarding claim 18, please refer to claim 2 for the explanation.

Regarding claim 20, please refer back to claim 4 for the explanation.

Regarding claim 21, please refer back to claim 1 for the explanation.

Regarding claim 22, please refer back to claim 6 for the explanation.

Regarding claim 24, please refer back to claim 8 for further explanation.

Regarding claim 25, please refer to claim 2 for the explanation. Also, Miyahara teaches the processor (column 6, lines 42) and storage unit (column 20, line 65).

For claim 26, please refer back to claim 22 and claim 25 for the explanation.

Allowable Subject Matter

7. Claims 3, 7, 11, 15, 19, and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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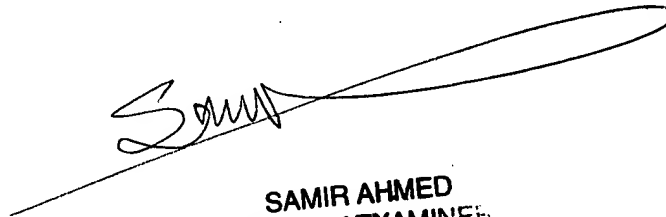
Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 571-272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 571-272-7414. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 571-273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

BL
July 28, 2005



SAMIR AHMED
PRIMARY EXAMINER